



Government of Kerala

PROVISIONAL REPORT ON 9th AGRICULTURAL CENSUS-(PHASE-1) 2010-11



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GOVERNMENT OF KERALA

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2013

PREFACE

In view of the imperative need for detailed data on structure and other characteristics of Agricultural Holdings, Ministry of Agriculture, Department of Agriculture and co-operation, Government of India decided to conduct quinquennial Agriculture census since 1970-71 in collaboration with state governments and Union Territories in conformity with the concepts & definitions used in world Agriculture census. For Agriculture census the land which is actually cultivated/operated by a person/group of persons/institution is considered as a basic unit of enumeration and the expression "Operational Holding" is used in collection of data.

The 9th Agriculture census was carried out in Kerala during 2010-11 as the reference year. The field work was done by the investigators of the department supervised by the officers of the department. The data processing was done by the computer division of the Directorate.

The provisional results of 9th Agriculture Census phase I 2010-11 in the state are presented in this report. The first 2 chapters contain introduction, concepts, definitions methodology. Results are presented with summary findings analytical notes, tables, etc in chapter III. I would like to appreciate the efforts put in by the Agriculture Census division for bringing out this publication. Sri.M.Narayanan, Assistant Director had taken the responsibility of preparing the report with the help of Smt.S.C.Soni and Sri.P.k John, Research Assistants and, Sri.B.Nadirsha, Statistical Assistant Grade.II, Smt.Sreelatha K.V, CA of Agriculture Census division under the guidance of Sri.T.Gorkey Jose, Additional Director and Sri.A.Rajan, Joint Director & State Technical officer of Agriculture Census.

I hope that this publication is capable of throwing light on the structure and pattern of agriculture in the state which in turn helps the planners, policy makers, decision makers, researchers etc.

Suggestions, if any are most welcome.

Thiruvananthapuram

6/2/2013

Sd/-

V.Ramachandran
Director

CHAPTER-1

INTRODUCTION

Government of India have been conducting Agriculture census once in five years regularly since 1970-71, following the broad guidelines of the World Agricultural Census. World Agriculture Census is conducted by the FAO of United Nations. Agricultural Census is a large scale statistical operation for the collection and compilation of quantitative information about the structure of agriculture in the country. An agricultural operational holding is the ultimate unit for decision making for development of agriculture at micro level. So an operational holding is taken as the statistical unit of data collection for describing the structure of agriculture.

Agriculture Census is implemented in three distinct Phases which are statistically linked together. Each Phase focus on different aspects of Agricultural Statistics. First phase consists of listing of operational holdings with area and social characteristics of holders. Details of Agricultural characteristics of holding are collected from selected wards in the second phase. In phase 3, data on input use pattern are collected from selected holdings in selected wards. Thus the whole operations of Agricultural Census in India is not really a complete Census. In fact it is a combination of census and Sample Survey.

The first comprehensive country wide Agriculture Census was organized in India by the Ministry of Agriculture during the year 1970-71 which was followed by reference years 1976-77, 1980-81, 1985-86, 1990-91, 1995-96, 2000-01, 2005-06 and 2010-11. This report relates for the 9th Agriculture Census 2010-11. This is a 100% centrally sponsored scheme.

The main objectives of the Census are as follows.

1. To describe Agricultural Statistics and related characteristics of agriculture by providing statistical data on operational holdings, including Land utilization, Live Stock, Agricultural machinery and implements, Use of chemical fertilizers etc.
2. To provide data needed for formulating new agricultural development programmes and for evaluating the progress.
3. To provide basic frames of households and operational holdings for carrying out future surveys.
4. To lay down a basis for developing an integrated programme for current Agricultural Statistics.

As in the former Census the mode of sample survey (Simple Random Method) is used in this round also.

Approach for Data Collection

The basic unit for collecting data on Agricultural Statistics is the operational holding ie, the holding of the actual cultivator who need not be the owner is the unit for collection of data. As comprehensive land records are not available in the non land record states like Kerala the required data would be collected from the operational holders through sample surveys by adopting enquiry method. The data is collected from the operational holders in selected wards in the prescribed schedules by visiting every house holds/institutions.

Schedules

The following schedules are used for the conduct of Agriculture Census.

Schedule L1 : List of Households and operational holdings in the sample ward.

Schedule L2: List of Institutional holdings in the sample ward
(complete enumeration in the sample ward).

Schedule L3: Ward summary.

Schedule L4: List of operational holdings in the sample ward and sample selection
of holdings.

Schedule T1: Abstract of Number and Area of operational holdings by different size
classes classified according to sex wise, social group wise Individual
/Joint/Institutional wise.

Schedule SS: Sample Selection Summary.

Schedule H : Particulars of Operational Holders.

Item coverage

Data on the following main aspects were collected during the Agriculture Census with the agriculture year 2010-11 (July 2010 to June 2011) as the reference year. During Phase 1, viz, the listing phase, data on number and area of operational holdings according to prescribed size classes for different social group and sex were collected. In the 1st phase, data on basic agricultural infrastructure available in the sample wards were also collected. In Phase 2, which is the main census operation, though only for selected holdings in the selected wards, the data on the following five aspects were collected.

1. Dispersal of holdings
2. Tenancy
3. Land utilization
4. Irrigation status and Source wise area irrigated
5. Crop wise area irrigated

All the data were compiled separately for the operational holdings of four groups, viz., Scheduled Caste, Scheduled Tribes, Others and Institutional, and also for the total of this groups. The Priority Table-1, which related to Number and Area of holdings by various size classes was prepared sex wise, social group wise and individual; joined, institutional wise.

Sampling Design

A stratified two stage sampling design is recommended for Agriculture Census in the non-land record states. In view of the increasing demand for Agricultural Census data at Block level, it has been decided that the community Development Block or some other similar homogeneous administrative units (Municipality and Corporation) should be taken as stratum. The first stage unit within the stratum will be the ward and the second stage unit will be the operational holdings.

For the 2010-11 census a stratified two stage sampling design was recommended in the non-land record states like Kerala. The stratum is block. The first stage unit within that was the Panchayat ward and the second stage was the operational holdings. In view of the increasing demand for Agriculture Census data at Block level, it was suggested that the community Development Block should be the stratum in the rural area and Municipalities/Corporation in Urban area. From each stratum 20% of the wards in each block and 20% of the wards/divisions from each Municipality/Corporation area were selected using circular systematic random sampling method. A total of 3847 Wards/Divisions were selected for the survey. In each selected ward all the operational holders were listed in Schedule L1. A separate list of institutional holdings was also

prepared for each sample ward during the time of listing in Schedule L2. During the time of listing some basic agriculture information for the sample ward was also collected in Schedule L3.

For detailed survey 20% of the holdings are selected from the size class 0-246 Cents i.e., below 1 ha, 50% from above 1 ha, and below 10 ha, 100% from 10 ha and above. Schedule L4 is used to prepare the sampling frame for the selection of the required number of holdings for collecting detailed information in Schedule H. All the institutional holdings in the selected wards were included in the sample for filling Schedule H, i.e., no sampling has done for institutional holdings.

Primary field work

The primary field work consists of collecting information in respect of resident cultivators in the sample wards. Non-resident cultivators are not covered in the survey as it may be difficult to approach them. A separate list of institutional holding are also prepared for each sample ward.

Concepts, Definitions and Methodology

In Agriculture Census data is to be collected on the basis of “de-facto” (by fact) position rather than “de-jure” (by right) position.

1. Operational Holdings

All land which is used wholly or partly for agricultural production and is operated as one technical unit by one person alone or with others without regard to title, legal form, size or location.

2. Technical Units

A technical unit has been defined as that unit which is under the same management and has the same means of production such as labour force, machinery and animals.

3. Operated Area

Operated area would include both cultivated and uncultivated area, provided part of it is put to agricultural production during the reference period.

The Operated area may be comprise of

- a) Land owned and self operated
- b) Land Leased in
- c) Land otherwise operated

a) Land owned and self operated

Land for which the cultivator has the right to permanent heritable possession would be considered as owned. This would include.

Land held from Government or others under grant or lease or assignment with right of permanent heritable possession with or without right of transfer.

Land operated under perpetual lease.

Self-operated land would include,

Self cultivation,

Land cultivated through members of the family,

Land cultivated with the help of hired labour,

Note: Land owned and self-operated should not include land leased out to others.

b) Leased in

Area leased in is defined as land taken on lease from others without any permanent right of possession for the lessee. Land may be leased in for.

- I. Fixed money
- II. Fixed produce
- III. Share of produce
- IV. Usufructuary , mortgage

Under (iv), the ownership of the property is with the mortgager but the possession is with the mortgagee (ie. The person to whom the mortgage is made or given), income from the property accrues to the Mortgagee and the mortgage is terminated as soon as the full amount is released.

c) Area otherwise operated

An operational Holder is the person who has the responsibility for the operation of the agricultural holding and who exercise the technical initiative and is responsible for its operation. He may have full economic responsibility or may share it with others.

4. Operational Holder

An operational holder is the person who has the responsibility for the operation of the agricultural holdings and who exercise the technical initiative and is responsible for its operation. He may have full economic responsibility or it may share with others. The operational holder may be individual/Joint/Institutional.

- I. Individual:** If the holding is being operated either by one person alone or by group of persons who are the members of the same households, it will be considered as an individual holdings.
- II. Joint:** If two or more persons belonging to different households share jointly as partners in the economic and technical responsibility for the operation of an agricultural holding, such holding would be considered as joint.
- III. Institutional:** Holding such as government farms, sugarcane factories farms, co-operative farms, lands managed by trust would be treated as institutional.

5) Agricultural Production

Agricultural production includes growing of field crops, fruits, seeds, tree nurseries (except those of forest trees) vegetables and flowers, production of coffee, tea, cocoa, rubber, jute, oil seeds, fodder grass etc. If efforts is made for raising grass, it will be treated as agricultural operation.

6) Resident and Non-resident operational holder

All the cultivators residing in particular Panchayat, Municipality/Corporation ward cultivating some land are resident cultivators of that sample ward irrespective of fact whether they are cultivating land within that village or outside. A resident cultivator

may have (i) entire area of the holding located in the sample ward of his residence, (ii) partly within the sample ward of residence and partly outside; and (iii) entirely outside the ward of residence.

7) Complete/Part Holding

A holding is said to be complete holding if the entire operated area of that holding is located in the same ward. If the operated area spread over in more than one ward, it would be considered as part holding.

8) Wholly irrigated, partly irrigated and wholly un irrigated holdings.

If the entire net area sown in an operational holding is equal to net area irrigated, such holding is considered as wholly irrigated holding. In case part of the net sown area is irrigated, it will be partly irrigated; and if the entire sown area has not received any irrigation during the year of reference, such holding would be wholly un irrigated.

9) Land Utilisation

Operated area would be classified in to six broad categories:

- i. Net area sown
- ii. Current fallow
- iii. Fallow land other than current fallow
- iv. Other uncultivated land excluding fallow
- v. Cultivated waste
- vi. Not available for cultivation

Methodology

The basic unit for the collection of data in Agriculture Census is the operational holding. The holding of the actual cultivator, not the owner is the unit for collection of data. The data for the entire land operated by the cultivator were collected and no outer limit was fixed for pooling all the parcels of an operational holding. As there are no comprehensive land records in the non-land record states, like Kerala, the required data were collected through sample survey by adopting enquiry method, from the operational holders of the selected sample wards.

Limitations

The main problem encountered during the analysis of data was under reporting. This was visible in the area reported under the operational holdings as well as under various crops. This is mainly due to the enquiry method adopted for the survey. The cultivators, the majority of them not keeping any account, were furnishing information from their memory. This resulted in incorrect information especially in the case of fertilizers and pesticides, crops for different seasons for the year etc. Any how much care has been taken in collecting correct information through probing by investigators. The ceiling provisions of an individual family under the Kerala Land Reforms Act were another reason for under reporting by the holder of the land. In the case of mixed cropping pattern, area under cultivation of different crops can be written only by counting the number of trees and then converting the same into area using standard conversion factors. This trend of under reporting is a common feature in a census of this type since it is the only method of collection of data at micro level at lesser cost. Data can be made use of after giving proper allowance to the estimates knowing the limitation and deficiencies of the census data.

CHAPTER – II
9th AGRICULTURE CENSUS

The Ninth Agriculture Census 2010-11 was conducted in Kerala during the period August 2011. The field work of the 9th census was carried out by the investigators of the Economics and statistics department. The whole census operations were supervised by the nucleus staff at state headquarters consisting of

Joint Director	1
Assistant Director	1
Administrative Assistant	1
Research Assistant	2
Confidential Assistant	1
Typist	1
Statistical Assistant Grade-I	1
Statistical Assistant Grade-II	1
Peon	1

Government of Kerala vide GO(Rt) No. 201/11/plg dated 30.06.2011 had issued, sanction for the implementation of this Centrally Sponsored Scheme with 100% Central Assistance. The field work of I Phase of the Census was completed by 2011. The tabulation and processing of data was done in the computer division of the department. The personnel from the Agricultural Census division had rendered all assistance during data entry work especially during concurrent clarification of doubts regarding filled in schedules. The first sets of tables were forwarded to Government of India by march 2011.

The Table I - Number and Area of operational holdings by size class were approved by the Government of India by the last quarter of 2012. The final Table I are generated block wise, district wise and for the state for all the social groups Institutional and scheduled caste, scheduled tribes and other categories separately.

Field organization at State Level

The field work was done by the Investigators of this Department. Statistical Inspectors/Taluk Statistical Officers/Additional District Officers/Price Supervisory Officers and Deputy Directors of the districts provided the leadership at the district level under the technical guidance from the Head Office.

Before the commencement of the 2010-11 census, intensive training was given to all personnel involved in the field work. Wide publicity through media was also given for dispelling the fear of the farmers that they can furnish correct information to the enumerators. It was also made clear that individual information about operational holding would not be released. For the accuracy of the data intensive periodical inspections were conducted by the supervisors. Senior officers from headquarters also conducted intensive inspection.

The tabulation of the census data was done in the computer division of the department. The Senior Officers of the scheme provided necessary technical guidance in this regard. The concept and definitions adopted for the conduct of the census with detailed explanation have been included in instructions to the Investigators prepared in Malayalam. Analysis of data has been made separately for Scheduled Caste, Scheduled Tribes and other categories

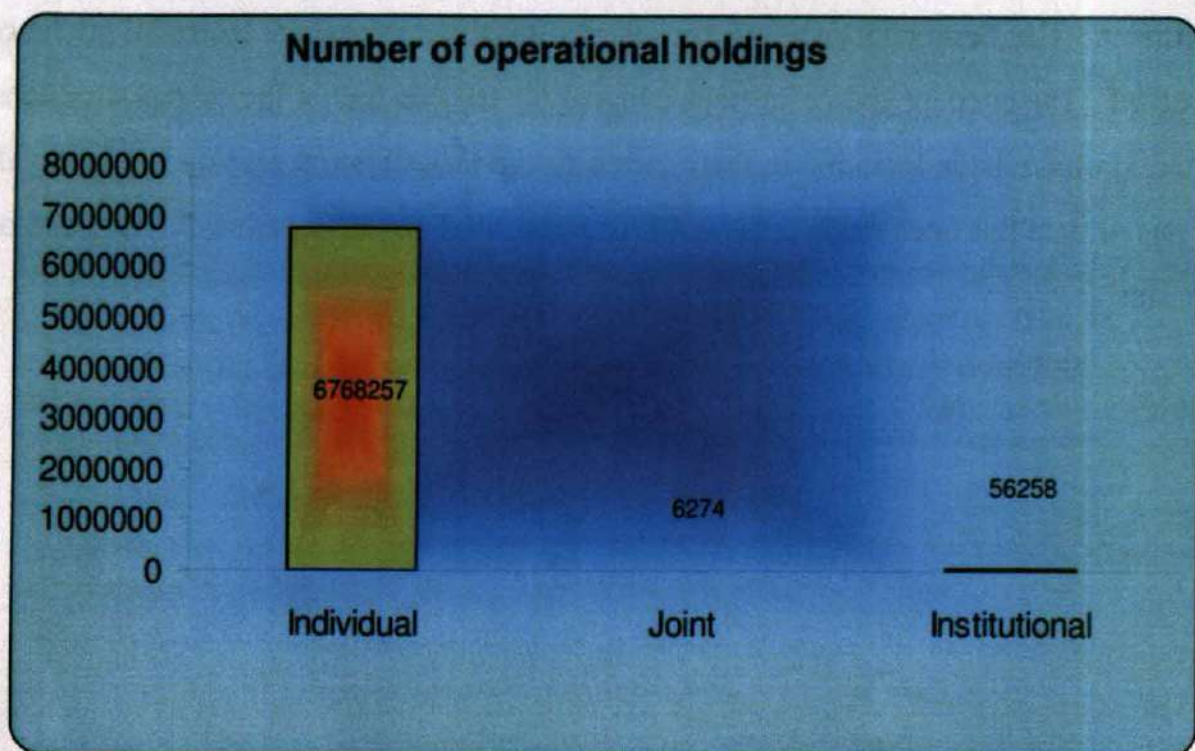
CHAPTER III

RESULTS OF THE CENSUS

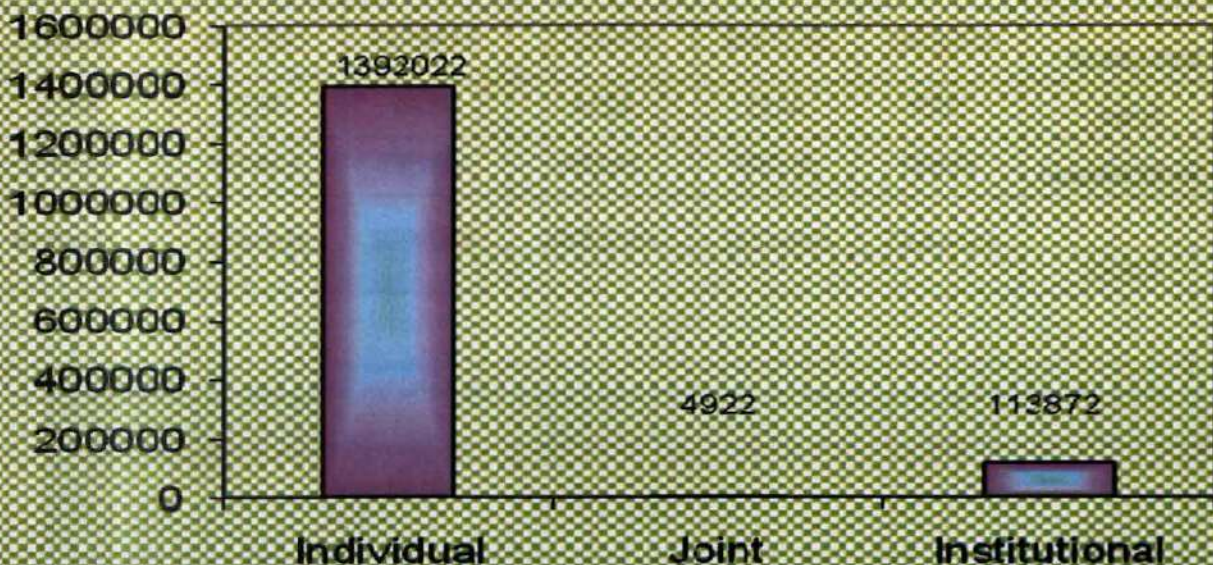
According to the Agricultural Census 2010-11 the total number of operational holdings in Kerala has been estimated 68.31 lakhs out of which individual holdings accounted for 67.68 lakhs. This accounted for 99.08%. The remaining 0.92% are institutional and joint holdings. There are 6274 joint holdings reported during 2010-11 census.

Table-I

Type of operational holdings	No. of operational holdings	Area operated (Ha)
Individual	6768257	1392022
Joint	6274	4922
Institutional	56258	113872
Total	6830789	1510816



Area of operational holdings(Ha)

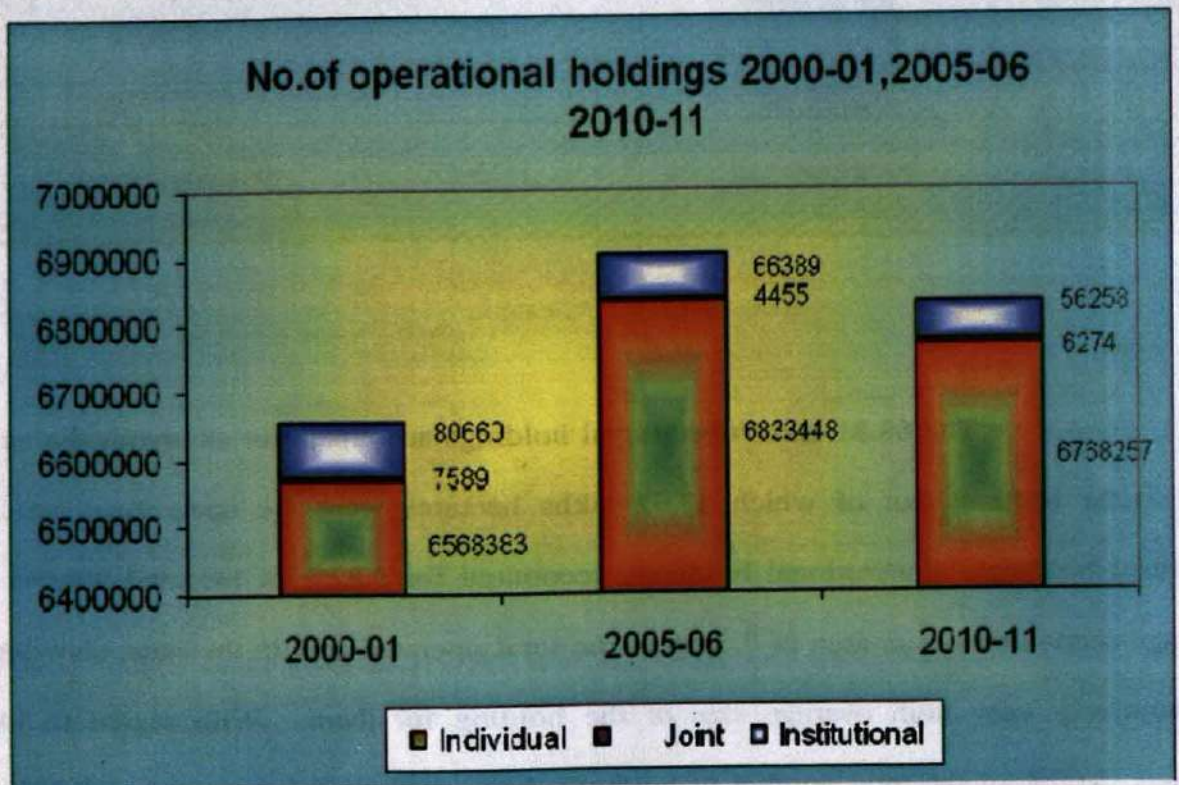


The 68.31 lakhs operational holdings accounted for an operated area of 15.11 lakhs hectares out of which 13.92 lakhs hectares were the operational area of individual holdings. Institutional holdings, accounted for 0.82% of the total number of holdings accounted for an area of 7.54% of the total operated area in the state; showing a comparatively very high average size of the holding for them. With regard to joint holdings, 0.09% of the total number of holdings, have accounted for an area of 0.33% of the total operated area in Kerala.

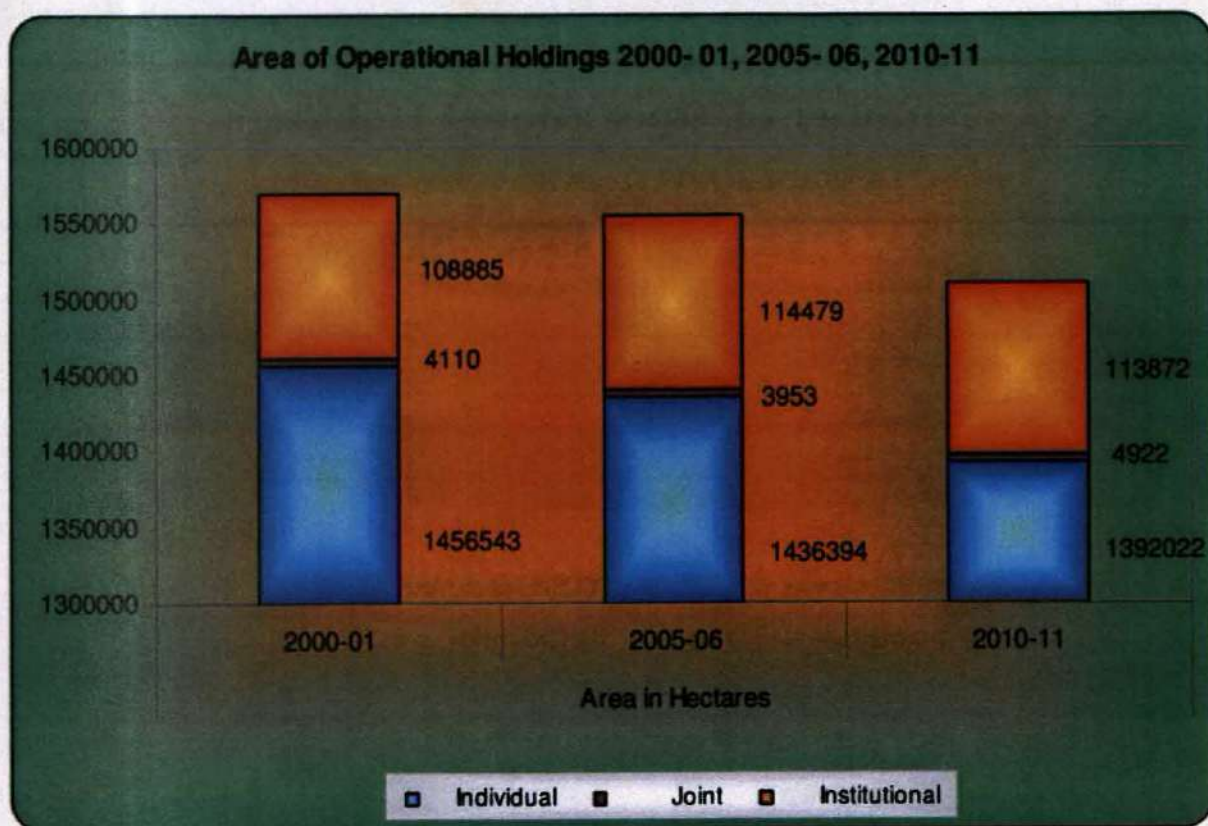
Comparison with 2000-01,2005-06,2010-11 Census

Table-11

Number and Area of Operational holdings during 2000-01,2005-06, 2010-11						
Type	Number of Operational holdings			Area in Hectares		
	2000-01	2005-06	2010-11	2000-01	2005-06	2010-11
Individual	6568383	6833448	6768257	1456543	1436394	1392022
Joint	7589	4455	6274	4110	3953	4922
Institutional	80660	66389	56258	108885	114479	113872
Total	6656632	6904292	6830789	1569538	1554826	1510816



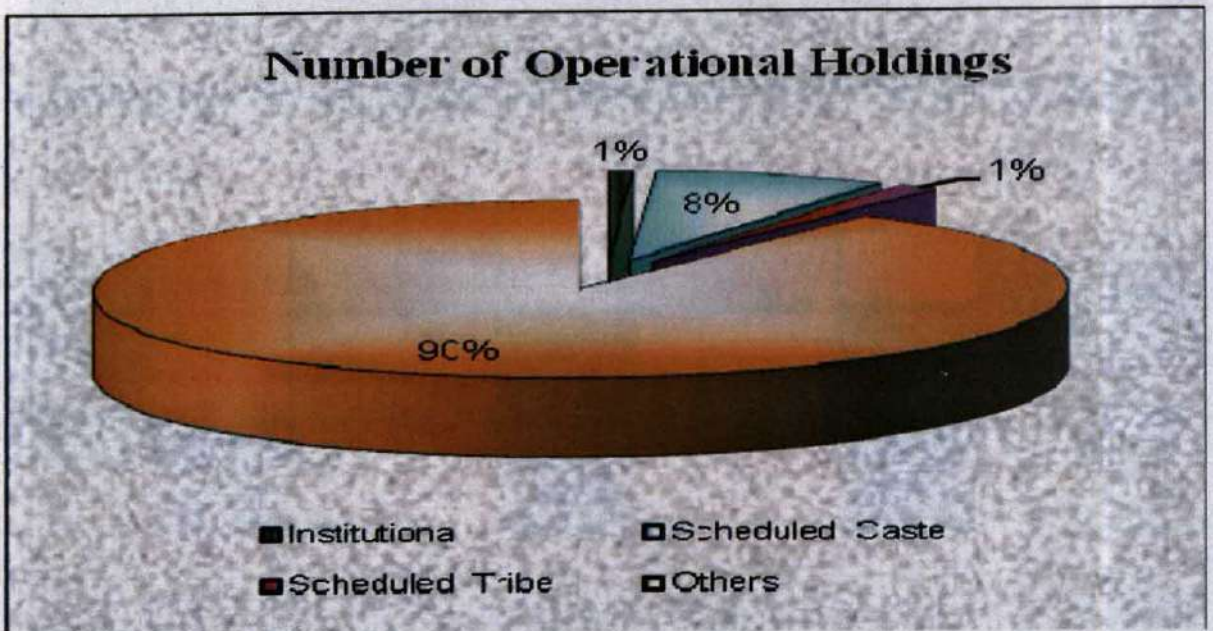
A comparative analysis of 2000-01, 2005-06 and 2010-11 Census figures shows that the total number of holdings under all categories together as increased from 66.57 lakhs in 2000-01 to 69.04 lakhs in 2005-06 and decreased to 68.31 lakhs in 2010-11 recording a percentage increase of 3.72 in 2005-06 and a percentage decrease of 1.1 in 2010-11.



As far as the number of individual holdings are concerned, the percentage increase was 4.04 in 2005-06 and a decrease of 0.95 in 2010-11. Institutional holdings are decreased by 17.69% in 2005-06 and 15.26 in 2010-11. There is a diminishing trend in area from 2000-01 to 2005-06 and from 2005-06 to 2010-11 for individual holdings.

Table-III

Social Group	No. of Operational Holdings	Area Operated (Ha)
Institutional	56258	113872
Scheduled Caste	532005	35247
Scheduled Tribe	95161	34442
Others	6147365	1327255
Total	6830789	1510816



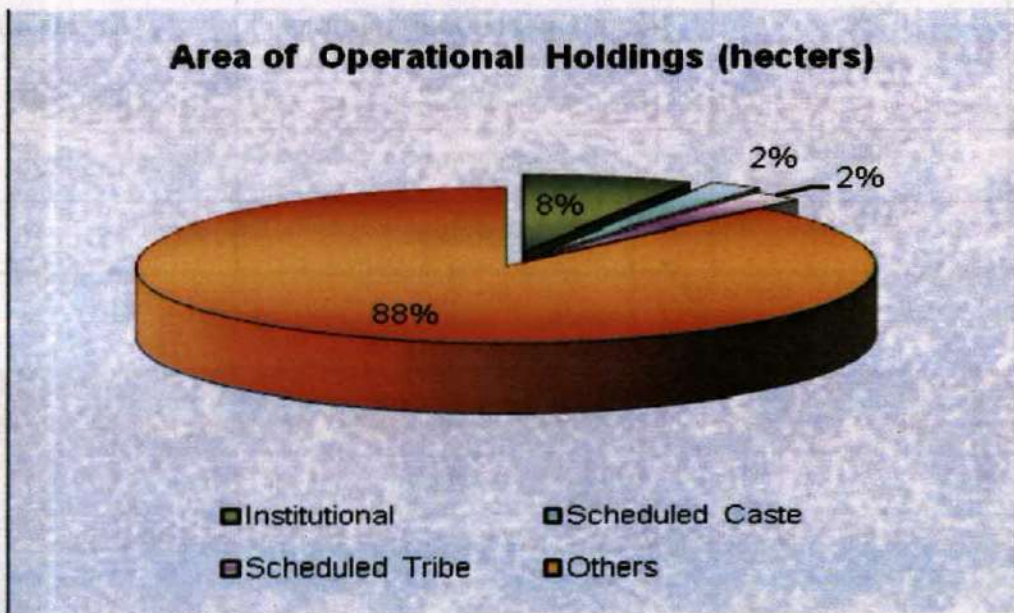
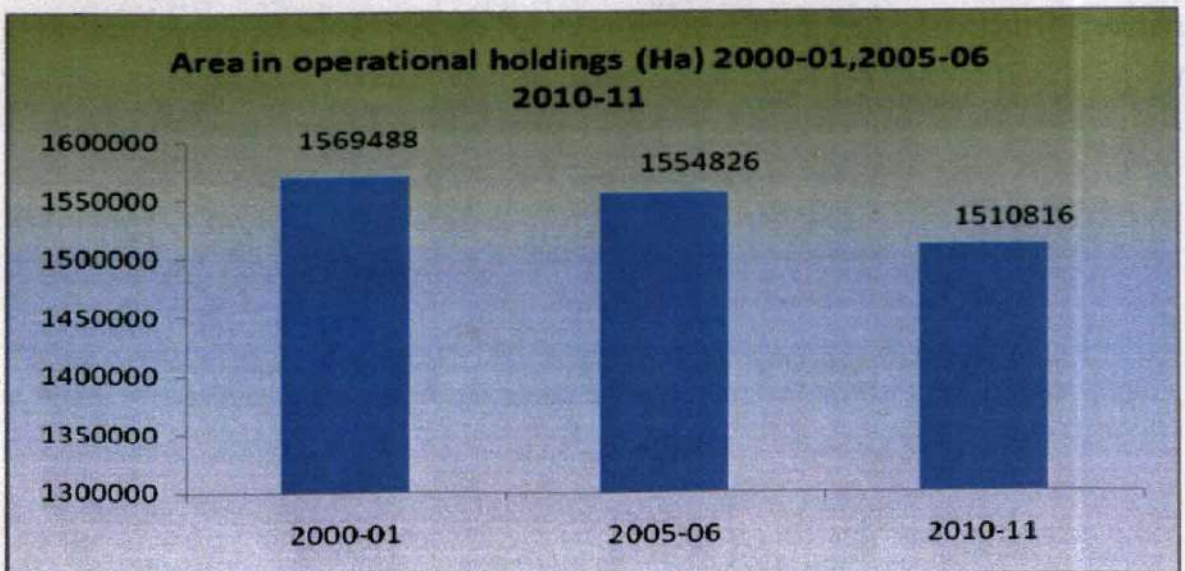
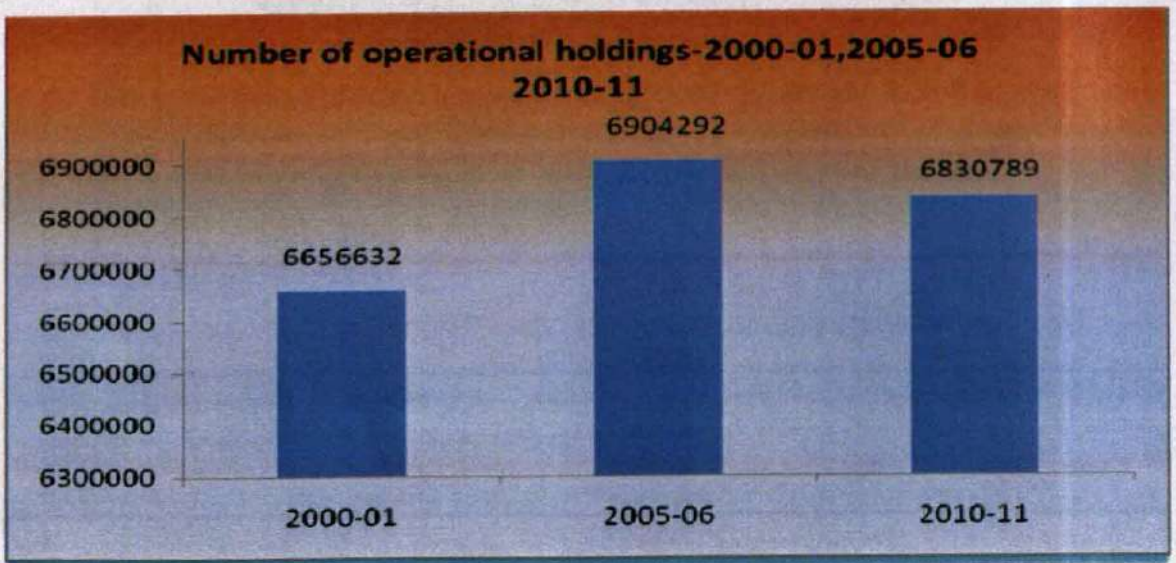


Table III reveals the fact that out of the total of 6830789 holdings 6147365 holdings are belonging to 'Others' category ie., 89.99% of the total. Only 7.79% for Scheduled Caste, 1.39% for Scheduled Tribe and 0.82% for Institutional holdings. The corresponding percentage of area are Others 87.85%, Scheduled Caste 2.33%, Scheduled Tribe 2.28% and Institutional 7.54.

Table -IV

Number and Area of Operational holdings during 2000-01,2005-06,2010-11

Sl.no	Year	No. of Operational holdings	Area(Ha)
1	2000-01	6656632	1569488
2	2005-06	6904292	1554826
3	2010-11	6830789	1510816



It is obvious from the above table that an increasing trend in the number of operational holdings from 2000-01 to 2005-06 and decreasing trend in 2010-11, whereas a diminishing trend is observed in the corresponding area operated.

The land holdings were classified in to 10 size classes according to size and detailed tables in respect of the estimated number and area of operational holdings have been prepared. But for detailed discussion, comparison and analysis of the census results, these 10 size classes have been grouped up to five size groups.

1. Below 1 hectare (marginal)
2. 1 to 2 hectares (small)
3. 2 to 4 hectares (semi-medium)
4. 4 to 10 hectares (Medium)
5. 10 hectares and above (large)

Type of holding

Table IV 1 in the Appendix gives the distribution pattern of operational holdings under individual, institutional and joint. Out of the total holdings of 68.31 lakhs, the size group below 1 hectare account for 65.80 lakhs which is the 96.33% of the total number of holdings. The total area operated by these holdings is 885644 hectares which works out to 58.62% of the total area. The average size of the group is 0.13 hectares. Next to marginal holders, the holders in the group of small, numbering to 1.80 lakhs which is the 2.64% of the total number of holdings with an operated area of 282305 hectares which is 18.69% of total operated area with an average size class of 1.57 hectares. As in the case of past censuses, the larger size class constitute the lower number of operational holder and larger area of operational holding with average size of operational holding 64.58 hectares

Average size

Table-1V-1

Sl.no	Size class hectare	No of Operational holders (in lakhs)	Area of Operation (hectares)	Average size of holders (hectares)
1	Below 1 hectare	65.80	885644	0.13
2	1 to 2 hectares	1.80	282305	1.57
3	2 to 4 hectares	0.57	159075	2.79
4	4 to 10 hectares	0.12	64063	5.33
5	10 hectares and above	0.02	119729	59.86
	All	68.31	1510816	0.22

The average size of an operational holding was 0.22 hectare in 2010-11. This was against 0.24 hectare in 2000-01 and 0.23 hectare in 2005-06.

Table IV-2

Average size of individual and joint holdings during 2000-01, 2005-06, 2010-11

Sl.no	Size class	2000-01	2005-06	2010-11
	2	3	4	5
1	Below 1 hectare	0.14	0.14	0.13
2	1.00-1.99	1.32	1.33	1.57
3	2.00-3.99	2.51	2.56	2.79
4	4.00-9.99	5.3	5.25	5.32
5	10.00 and above	37.31	58.44	59.86
	Total	0.24	0.23	0.22

Scheduled Caste

Table IV. 1 (a) Appendix reveals the number and area operated by operational holders belonging to Scheduled Caste. The details reveals that the total number of holdings in this category for all size classes decreased from 579188 in 2005-06 to 532005 during 2010-11, recording a decrease of 47183 i.e. 8.15%.

Regarding area of the operational holders of this social group, the same has decreased from, 39618 hectares to 35247, which shows a percentage decrease of 11.03%.

Scheduled Tribe

Table IV – 1 (b) Appendix shows the number and area operated by operational holders belonging to Scheduled Tribe. The figures shows that the total number of holdings in this social group for all size classes increased from 87307 in 2005-06 to 95161 in 2010-11 recording a increase of 9%, correspondingly operated area increased from 30197 hectares in 2005-06 to 34442 hectares in 2010-11. The average size of holdings increased in this social group.

Distribution of holdings according to social groups

Table IV 3 below gives the number and area of operational holdings according to major social groups i.e. Scheduled Castes, Scheduled Tribes and others under different size classes. The inter percentages are given in brackets.

Table IV- 3

Number and Area of Operational Holdings According to Major Social Group

Sl. No	Size class(Ha)	Number of operational holdings				Area operated (Hectares)			
		All	SC	ST	Others	All	SC	ST	Others
1	Marginal (Below 1.00)	6579692 (96.32)	529419 (99.51)	86041 (90.42)	5964232 (96.14)	885643.80 (58.62)	30927.18 (87.74)	17154.68 (49.81)	837558.94 (58.12)
2	Small (1.00-1.99)	180171 (2.64)	1975 (.37)	6117 (6.43)	172079 (2.77)	282305.13 (18.69)	2541.37 (7.21)	8056.99 (23.39)	271706.77 (18.85)
3	Semi-medium (2.00-3.99)	57028 (0.83)	516 (0.10)	2555 (2.68)	53957 (0.87)	159075.15 (10.53)	1329.21 (3.77)	6139.07 (17.82)	151606.87 (10.52)
4	Medium (4.00-9.99)	12044 (0.18)	95 (0.02)	428 (0.45)	11521 (0.19)	64063.02 (4.24)	449.02 (1.27)	2303.06 (6.69)	61310.94 (4.25)
5	Large (10.00&above)	1854 (0.03)	0	20 (0.02)	1834 (0.03)	119728.65 (7.92)	0	785.31 (2.28)	118943.34 (8.26)
6	All sizes	6830789 (100)	532005 (100)	95161 (100)	6203623 (100)	1510815.75 (100)	35246.78 (100)	34442.11 (100)	1441126.86 (100)

It is seen from the above Table that 99.51% of the Scheduled Caste operational holders (below 1 hectare) operated 87.74% of the total area of that category, 0.37% of the holders (1.00 to 1.99 hectare) operated 7.21% of the operated area, 0.10% (2.00 to 3.99 hectares) operated 3.77% of the operated area etc with regard to Scheduled Tribe 90.42% operational holders of this social group, belongs to below 1 hectare operate 49.82% of the operated area 6.43% of (in the size class 1 to 1.99 hectare) of the operational holders operate 23.39% of the area operated by them.

The concentration is higher in the marginal operators of other social group 96.14% in number and operated area 58.12%. The other concentration is in small (1.00 – 1.99 hectares) operates 2.77% and semi medium (2.00 to 3.99 hectare) 0.87% operating an area of 18.85% and 10.52% respectively.

A social group wise comparison of the results shows that out of the total operational holders, scheduled caste operational holders constitute only 7.79% and scheduled tribe operational holders constitute 1.39%. 90.82% of operational holders are in other social group. In the case of operated area also, i.e. scheduled caste 2.33% and scheduled tribe 2.28% and operational holders of general category constitute 95.39%.

Table IV (4) shows district-wise distribution of operational holding and area according to social group. Scheduled caste operational holders are largest in Thrissur district and it is lowest in Wayanad district. Operated area is largest in Idukki and lowest in Kasargod. ST operators are highest in Wayanad and 2nd Idukki. The operated area operated by Scheduled Tribe, operational holders are highest in Idukki and 2nd Wayanad. Operators from other categories are highest in Thiruvananthapuram district, whereas the operated area is highest in Idukki district.

Table IV-4
District wise Number and area of Operational holdings according
to major social groups

Sl. no.	DISTRICT	Number of operational holdings				Area operated (Hectares)			
		SC	ST	Others	Total	SC	ST	Others	Total
1	Thiruvananthapuram	59332	5013	686558	750903	2300	4062	79990	86352
2	Kollam	59060	2386	518851	580297	3150	793	86244	90187
3	Pathanamthitta	30305	4535	261978	296818	1916	1003	63852	66771
4	Alappuzha	32808	975	443560	477343	1951	47	65163	67161
5	Kottayam	20234	3205	395297	418736	1458	1169	121357	123984
6	Idukki	35837	15403	208375	259615	6385	9274	149190	164849
7	Ernakulam	47988	1925	597482	647395	2233	463	117356	120052
8	Thrissur	67566	1930	615244	684740	2933	145	96291	99369
9	Palakkad	65499	9496	424529	499524	4174	6026	135284	145484
10	Malappuram	50518	3284	636670	690472	3482	568	128808	132858
11	Kozhikode	38749	2317	597285	638351	2374	370	107842	110586
12	Wayanad	4534	27558	142324	174416	958	7146	82352	90456
13	Kannur	11972	6541	466708	485221	1108	1573	124434	127115
14	Kasargod	7603	10593	208762	226958	825	1803	82964	85592
	State	532005	95161	6203623	6830789	35247	34442	1441127	1510816

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IV-1 Number and area of Operational holdings (Area in Hectares)

All Social Groups

Sl. No.	Size Class (hectares)	Individual Holdings						Joint Holdings					
		Number			Area			Number			Area		
		2005-06	2010-11	% of Variation	2005-06	2010-11	% of Variation	2005-06	2010-11	% of Variation	2005-06	2010-11	% of Variation
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Below 1.00	6540345	6526184	-22	883658	874409.33	-1.05	3645	5039	38.24	1071	1490.61	39.18
2	1.00-1.99	210341	175252	-16.68	278754	275660.03	-1.11	440	660	50	590	1006.90	70.66
3	2.00-3.99	67483	54536	-19.19	172801	152444.04	-11.78	200	400	100	516	1106.23	114.39
4	4.00-9.99	13778	11024	-19.99	72414	58273.31	-19.53	120	155	29.17	629	874.33	39
5	10.00&above	1501	1261	-15.99	28767	31235.22	8.58	50	20	-60	1147	443.81	-61.31
6	All sizes	6833448	6768257	-0.95%	1436394	1392021.93	-3.09%	4455	6274	40.83%	3953	4921.88	24.51

Sl. no	Size Class (hectares)	Institutional Holdings						Grand Total							
		Number			Area			Number			Area				
		2005-06	2010-11	% of Variation	2005-06	2010-11	% of Variation	2005-06	2010-11	% of Variation	2005-06	2010-11	% of Variation		
1	2	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	Below 1.00	58453	48469	-17.08	11058	9743.86	-11.88	6602443	6579692	-0.34	895786	885643.8	-1.13	0.14	0.13
2	1.00-1.99	4051	4259	5.13	5476	5638.2	2.96	214832	180171	-16.13	284820	282305.13	-0.88	1.33	1.57
3	2.00-3.99	2027	2092	3.21	5257	5524.88	5.10	69710	57028	-18.19	178574	159075.15	-10.92	2.56	2.79
4	4.00-9.99	960	865	-9.90	5713	4915.38	-13.96	14858	12044	-18.94	78757	64063.02	-18.65	5.30	5.32
5	10.00&above	898	573	-36.19	86975	88049.62	1.24	2449	1854	-24.30	116889	119728.65	3.60	47.73	64.58
6	All sizes	66389	56258	-15.26	114479	113871.94	-0.53%	6904292	6830789	-1.06%	1554826	1510815.75	-2.43%	0.23	0.22

1V-1 (a) Number and area of operational holdings (Area in Hectares)
Scheduled Caste

Sl. No.	Size class (hectares)	Individual Holdings						Joint Holdings					
		Number			Area			Number			Area		
		2005-06	2010-11	% of Variation	2005-06	2010-11	% of Variation	2005-06	2010-11	% of Variation	2005-06	2010-11	% of Variation
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Below 1.00	576588	529123	-8.23	35688	30848.20	-13.56	95	296	211.58	21	78.98	276.1
2	1.00-1.99	2084	1950	-6.43	2748	2503.54	-8.90	0	25	-	0	37.83	-
3	2.00-3.99	371	506	36.39	916	1307.14	42.7	10	10	0	21	22.07	5.1
4	4.00-9.99	40	95	137.5	224	449.02	100.46	0	0	0	0	0	0
5	10.00&above	0	0	0	0	0	0	0	0	0	0	0	0
6	All sizes	579083	531674	-8.19%	39576	35107.9	-11.29%	105	331	215.24%	42	138.88	230.67%

Sl. No.	Size Class (hectares)	Institutional Holdings						Grand Total						Average size of holdings	
		Number			Area			Number			Area			2005-06	2010-11
		2005-06	2010-11	% of variation	2005-06	2010-11	% of Variation	2005-06	2010-11	% of Variation	2005-06	2010-11	% of Variation		
1	2	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	Below 1.00	-	-	-	-	-	-	576683	529419	-8.2	35709	30927.18	-13.39	0.06	0.05
2	1.00-1.99	-	-	-	-	-	-	2084	1975	-5.23	2748	2541.37	-7.52	1.32	1.29
3	2.00-3.99	-	-	-	-	-	-	381	516	35.43	937	1329.21	41.86	2.46	2.58
4	4.00-9.99	-	-	-	-	-	-	40	95	137.5	224	449.02	100.46	5.6	4.73
5	10.00&above	-	-	-	-	-	-	0	0	0	0	0	0	0	0
6	All sizes	-	-	-	-	-	-	579188	532005	-8.15%	39618	35246.78	-11.03%	0.07	0.07

IV.1 (b) Number and Area of Operational holdings (Area in Hectares)

Scheduled Tribe

Sl.No	Size class (hectares)	Individual Holdings						Joint Holdings					
		Number			Area			Number			Area		
		2005-06	2010-11	% of Variation	2005-06	2010-11	% of Variation	2005-06	2010-11	% of Variation	2005-06	2010-11	% of Variation
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Below 1.00	78990	85826	8.65	16349	17060.72	4.35	208	215	3.37	83	96.96	16.82
2	1.00-1.99	6155	6011	-2.34	8039	7904.22	-1.68	10	106	960	13	152.77	1075.15
3	2.00-3.99	1629	2520	54.7	4019	6049.13	50.51	15	35	133.33	37	89.94	143.08
4	4.00-9.99	280	418	49.29	1354	2254.65	66.52	5	10	100	20	48.41	142.05
5	10.00& above	15	20	33.33	283	785.31	177.49	0	0	0	0	0	0
6	All sizes	87069	94795	8.87%	30044	34054.03	13.35%	238	366	53.78%	153	388.08	153.65%

Sl. No.	Size Class (hectares)	Institutional Holdings						Grand Total						Average size of holdings	
		Number			Area			Number			Area			2005-06	2010-11
		2005-06	2010-11	% of Variation	2005-06	2010-11	% of Variation	2005-06	2010-11	% of Variation	2005-06	2010-11	% of Variation	2005-06	2010-11
1	2	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	Below 1.00	-	-	-	-	-	-	79198	86041	8.64	16432	17157.68	4.42	0.21	0.20
2	1.00-1.99	-	-	-	-	-	-	6165	6117	-0.78	8052	8056.99	0.06	1.31	1.32
3	2.00-3.99	-	-	-	-	-	-	1644	2555	55.41	4056	6139.07	51.36	2.47	2.40
4	4.00-9.99	-	-	-	-	-	-	285	428	50.18	1374	2303.06	67.62	4.82	5.38
5	10.00&above	-	-	-	-	-	-	15	20	33.33	283	785.31	177.5	18.87	39.26
6	All sizes	-	-	-	-	-	-	87307	95161	9%	30197	34442.11	14.06%	0.35	0.36

IV-2 Distribution of District wise number of operational holdings by size class

All Social Groups

Sl. No	Size Class	Trivandrum	Kollam	Pathanamthitta	Alappuzha	Kottayam	Idukki	Ernakulam	Thirissur	Palakkad	Malappuram	Kozhikode	Wayanad	Kannur	Kasaragod	State
1	Below - 1.00	743341	573022	287778	469853	391649	228410	626985	672009	469021	670231	621943	154863	461662	208925	6579692
2	Small 1.00-1.99	5948	6074	7366	5285	18658	23051	14900	9853	19031	14513	12467	13341	17170	12514	180171
3	Semi-medium 2.00-3.99	1300	991	1393	1712	6652	6536	4451	2380	8831	4703	3287	4832	5435	4525	57028
4	medium 4.00-9.99	274	170	236	408	1502	1263	884	453	2393	897	599	1177	879	909	12044
5	large - 10 above	40	40	45	85	275	355	175	45	248	128	55	203	75	85	1854
6	All categories	750903	580297	296818	477343	418736	259615	647395	684740	499524	690472	638351	174416	485221	226958	6830789

IV-2(a) Distribution of District wise number of Operational holdings by size class

Scheduled Caste

Sl.No	Size Class (Ha)	Trivandrum	Kollam	Pathanamthitta	Alappuzha	Kottayam	Idukki	Ernakulam	Thirissur	Palakkad	Malappuram	Kozhikode	Wayanad	Kannur	Kasaragod	state
1	Below -1.00	59297	59020	30250	32748	20124	34607	47918	67471	65265	50243	38669	4362	11877	7568	529419
2	Small 1.00-1.99	20	40	50	50	80	865	55	75	194	245	80	101	85	35	1975
3	Semi-medium 2.00-3.99	5	0	0	10	30	310	15	15	35	25	0	61	10	0	516
4	medium 4.00-9.99	10	0	5	0	0	55	0	5	5	5	0	10	0	0	95
5	large - 10 above	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	All categories	59332	59060	30305	32808	20234	35837	47988	67566	65499	50518	38749	4534	11972	7603	532005

IV-2(b) Distribution of District wise number of Operational Holdings by size class

Scheduled Tribe

Sl. no	Size Class (Ha)	Trivandrum	Kollam	Pathanamthitta	Alappuzha	Kottayam	Idukki	Ernakulam	Thirissur	Palakkad	Malappuram	Kozhikode	Wayanad	Kannur	Kasaragod	State
1	Below -1.00	3758	2242	4419	975	2922	12264	1824	1930	7445	3129	2267	26073	6335	10458	86041
2	Small 1.00-1.99	916	144	106	0	218	2085	45	0	1214	35	50	1033	146	125	6117
3	Semi-medium 2.00-3.99	314	0	10	0	50	884	56	0	669	110	0	397	55	10	2555
4	Medium 4.00-9.99	20	0	0	0	15	165	0	0	163	10	0	50	5	0	428
5	large - 10 above	5	0	0	0	0	5	0	0	5	0	0	5	0	0	20
6	All categories	5013	2386	4535	975	3205	15403	1925	1930	9496	3284	2317	27558	6541	10593	95161

IV-3 District wise Distribution of area of operational holdings by size class

(Area in Hectares)

All Social Groups

Sl. no	Size Class	Trivandrum	Kollam	Pathanamthitta	Alappuzha	Kottayam	Idukki	Ernakulam	Thirissur	Palakkad	Malappuram	Kozhikode	Wayanad	Kannur	Kasaragod	state
1	Below - 1.00	71025.99	67191.75	49543.71	50171.85	60528.40	57987.42	70977.97	74281.16	64874.07	86479.30	77541.63	33949.96	77917.67	43172.92	885643.80
2	Small 1.00-1.99	8838.52	9197.99	11324.68	8214.03	29545.49	34868.78	2364.72	15375.58	30256.41	22701.98	19637.06	21091.44	27433.8	20194.65	282305.13
3	Semi-medium 2.00-3.99	3365.36	2788.04	3833.01	4861.87	18553.84	17588.12	12413.79	6651.26	24874.17	13246.30	9214.61	13677.62	15213.78	12793.38	159075.15
4	Medium 4.00-9.99	1455.89	844.96	1246.58	2243.08	8188.83	6816.51	4704.01	2196.50	12811.38	4820.83	3075.05	6465.26	4534.86	4659.28	64063.02
5	large - 10 above	1666.22	10164.37	822.50	1670	7167.33	47587.86	8331.93	864.64	12667.56	5609.90	1117.29	15271.75	2014.94	4772.36	119728.65
6	All categories	86351.98	90187.11	66770.48	67160.83	123983.89	164848.69	120052.42	99369.14	145483.59	132858.31	110585.64	90456.03	127115.05	85592.59	1510815.75

1V-3 (a) District wise Distribution of Area of Operational holdings by size class (Area in Hectare)

Scheduled Caste

Sl.no	Size class (Ha)	Trivandrum	Kollam	Pathanamthitta	Alappuzha	Kottayam	Idukki	Ernakulam	Thirissur	Palakkad	Malappuram	Kozhikode	Wayanad	Kannur	Kasaragod	state
1	Below -1.00	2216.80	3102.99	1820.80	1864.66	1274.27	4285.36	2118.71	2775.79	3798.11	3055.74	2272.33	603.22	966.93	771.47	30927.18
2	Small 1.00-1.99	26.83	46.67	65.01	63.89	107.82	1069.76	69.72	95.94	260.35	330.25	101.56	134.32	115.42	53.83	2541.37
3	Semi-medium 2.00 -3.99	12.60	0	0	21.92	76.05	788.86	44.57	41.51	95.12	71.67	0	151.13	25.78	0	1329.21
4	Medium	44.16	0	29.82	0	0	241.40	0	20.10	20	24.25	0	69.29	0	0	449.02
5	large -10 above	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	All categories	2300.39	3149.66	1915.63	1950.47	1458.14	6385.38	2233	2933.34	4173.58	3481.91	2373.89	957.96	1108.13	825.30	35246.78

IV-3 (b) District wise Distribution of area of operational holdings by size class

Sl.no	Scheduled Tribe	Size Class	Trivandrum	Kollam	Pathanamthitta	Alappuzha	Kottayam	Idukki	Ernakulam	Thirissur	Palakkad	Malappuram	Kozhikode	Wayanad	Kannur	Kasaragod	state
1		Below -1.00	1535.32	615.94	847.52	47.33	687.75	3387.29	287.91	144.67	1965.67	197.92	308.06	4291.09	1210.25	1630.96	17157.68
2		Small 1.00-1.99	1199.57	177.27	132.94	-	299.79	2765.61	61.93	0	1561.94	50.61	61.59	1398.58	197.30	149.87	8057.00
3		Semi-Medium 2.00-3.99	685.09	0	22.61	-	107.24	2107.42	113.51	0	1639.51	271.57	0	1041.01	128.86	22.25	6139.07
4		Medium 4.00-9.99	127.46	0	0	-	74.63	956.79	0	0	798.62	48.35	0	260.81	36.40	0	2303.06
5		large -10 above	513.94	0	0	-	0	56.65	0	0	60.24	0	0	154.48	0	0	785.31
		All categories	4061.38	793.21	1003.07	47.33	1169.41	9273.76	463.35	144.67	6025.98	568.45	369.65	7145.97	1572.81	1803.08	34442.12

IV- 4 Size class wise distribution of number, area and percentage of operational holdings according to major social groups

Sl. No.	Size class (Ha)	Number Of Operational Holdings			Area operated (hectares)				
		All	Sch. Caste	Sch. Tribe	Others	All	Sch. Caste	Sch. Tribe	Others
1	Below 1.00	6579692 (96.32)	529419 (99.51)	86041 (90.42)	5964232 (96.14)	885643.80 (58.62)	30927.18 (87.74)	17154.68 (49.82)	837558.94 (58.12)
2	Small(1.00-1.99)	180171 (2.64)	1975 (.37)	6117 (6.43)	172079 (2.77)	282305.13 (18.69)	2541.37 (7.21)	8056.99 (23.39)	271706.77 (18.85)
3	Semi medium (2.00-3.99)	57028 (0.83)	516 0.10	2555 (2.68)	53957 (0.87)	159075.15 (10.53)	1329.21 (3.77)	6139.07 (17.82)	151606.87 (10.52)
4	Medium (4.00-9.99)	12044 (0.18)	95 0.02	428 (0.45)	11521 (0.19)	64063.02 (4.24)	449.02 (1.28)	2303.06 6.69	61310.94 4.25
5	Large (10.00&above)	1854 (0.03)	0	20 0.02	1834 0.03	119728.65 (7.92)	0	785.31 2.28	118943.34 8.26
6	All sizes	6830789 (100)	532005 (100)	95161 100	6203623 100	1510815.75 100	35246.78 100	34442.11 (100)	1441126.86 100

* Figures in brackets are the percentage to the all sizes

IV-5. District wise number and area of operational holdings according to major social groups

Sl.no	DISTRICT	Number of Operational Holdings				Area operated (hectares)			
		Sch.Caste	Sch.Tribe	Others	Total	Sch.Caste	Sch.Tribe	Others	Total
1	Trivandrum	59332	5013	686558	750903	2300	4062	79990	86352
2	Kollam	59060	2386	518851	580297	3150	793	86244	90187
3	Pathanamthitta	30305	4535	261978	296818	1916	1003	63852	66771
4	Alappuzha	32808	975	443560	477343	1951	47	65163	67161
5	Kottayam	20234	3205	395297	418736	1458	1169	121357	123984
6	Idukki	35837	15403	208375	259615	6385	9274	149190	164849
7	Ernakulam	47988	1925	597482	647395	2233	463	117356	120052
8	Thrissur	67566	1930	615244	684740	2933	145	96291	99369
9	Palakkad	65499	9496	424529	499524	4174	6026	135284	145484
10	Malappuram	50518	3284	636670	690472	3482	568	128808	132858
11	Kozhikode	38749	2317	597285	638351	2374	370	107842	110586
12	Wayanad	4534	27558	142324	174416	958	7146	82352	90456
13	Kannur	11972	6541	466708	485221	1108	1573	124434	127115
14	Kasargod	7603	10593	208762	226958	825	1803	82964	85592
15	State	532005	95161	6203623	6830789	35247	34442	1441127	1510816

Year	Month	Day	Time	Latitude	Longitude	Altitude
1955	Jan	1	0800	12° 00' N	102° 00' E	1000
1955	Jan	2	0800	12° 00' N	102° 00' E	1000
1955	Jan	3	0800	12° 00' N	102° 00' E	1000
1955	Jan	4	0800	12° 00' N	102° 00' E	1000
1955	Jan	5	0800	12° 00' N	102° 00' E	1000
1955	Jan	6	0800	12° 00' N	102° 00' E	1000
1955	Jan	7	0800	12° 00' N	102° 00' E	1000
1955	Jan	8	0800	12° 00' N	102° 00' E	1000
1955	Jan	9	0800	12° 00' N	102° 00' E	1000
1955	Jan	10	0800	12° 00' N	102° 00' E	1000
1955	Jan	11	0800	12° 00' N	102° 00' E	1000
1955	Jan	12	0800	12° 00' N	102° 00' E	1000
1955	Jan	13	0800	12° 00' N	102° 00' E	1000
1955	Jan	14	0800	12° 00' N	102° 00' E	1000
1955	Jan	15	0800	12° 00' N	102° 00' E	1000
1955	Jan	16	0800	12° 00' N	102° 00' E	1000
1955	Jan	17	0800	12° 00' N	102° 00' E	1000
1955	Jan	18	0800	12° 00' N	102° 00' E	1000
1955	Jan	19	0800	12° 00' N	102° 00' E	1000
1955	Jan	20	0800	12° 00' N	102° 00' E	1000
1955	Jan	21	0800	12° 00' N	102° 00' E	1000
1955	Jan	22	0800	12° 00' N	102° 00' E	1000
1955	Jan	23	0800	12° 00' N	102° 00' E	1000
1955	Jan	24	0800	12° 00' N	102° 00' E	1000
1955	Jan	25	0800	12° 00' N	102° 00' E	1000
1955	Jan	26	0800	12° 00' N	102° 00' E	1000
1955	Jan	27	0800	12° 00' N	102° 00' E	1000
1955	Jan	28	0800	12° 00' N	102° 00' E	1000
1955	Jan	29	0800	12° 00' N	102° 00' E	1000
1955	Jan	30	0800	12° 00' N	102° 00' E	1000
1955	Jan	31	0800	12° 00' N	102° 00' E	1000

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4155

Vertical axis complete with 1000 ft. scale. Horizontal axis complete with 1000 ft. scale.

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Thiruvananthapuram